

Quarterly Report – Public Page

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Contract Number: DTPH56-07-T-000010

Prepared for: U.S. DOT/PHMSA and OTD

Project Title: Butt Fusion Integrity & Evaluation of NDE Technologies

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For quarterly period ending: January 31, 2009

Public Page Section

Activities/Deliverables Completed:

		SCH Date / CMPL	
Date			
Task 1:28	Interact with Industry Steering Committee - MILESTONE	1/31/2009	2/20/2009
Task 2:29	Computer/Analytical Modeling & Short Term Testing-	MILESTONE	1/31/2009 2/20/2009
Task 6:33	Sixth Quarterly Status Report –	MILESTONE	1/31/2009 2/20/2009

The point of contact for coordination, preparation, and distribution of any press releases is Angelo Fabiano, (212) 354 4790 Ext. 215, afabiano@northeastgas.org

General Information

The primary objective of the program is to develop a tightly controlled butt heat fusion process through comprehensive testing and evaluation using novel test method(s) which will help to validate the safe and long term performance of PE joints subjected to in-service field conditions. This will serve as the basis for an effective reference point for the continued development of advanced Non-Destructive Evaluation (NDE) technologies. Specifically, this program aims to develop comprehensive analytical models to characterize the impact of various types of in-service stress states and fusion process variables; develop comprehensive test data to characterize the long term performance of joints made under a controlled range of fusion parameters or set of fusion variables; develop a set of criterion to identify “suspect joints” – joints that are visually acceptable but fail prior to their intended design life. These results can be used as the basis for

process improvements and continued technology developments; and integration of new test methods and fusion parameters within applicable industry standards and specifications (ASTM, PPI, 49CFR Part 192).

Results and Conclusions:

A new test approach was developed that has the potential to assess long term butt fusion joint integrity. Based on preliminary testing to date, this test method appears to be a viable solution to assess butt fusion joints and it may be discriminating enough to evaluate a range of in-service fusion parameters and their effect on joint performance.

Plans for Future Activity: During the next quarter butt fusion joints will be prepared in accordance with the newly developed test plan. Screening tests will be performed to further develop and validate the new long term performance application. Large tensile axial loads with internal pressure will be applied to pipe samples to simulate in-service stress states typically encountered in the field.